



MANUAL MATERIAL HANDLING PROCEDURE

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January 2023

Purpose

The purpose of the IPS★ITCS Manual Material Handling Procedure is to apply ergonomic principles and sound decision-making to the workplace to reduce the number of manual lifts thus decreasing workplace injuries and, where possible, increasing productivity, quality, and efficiency. A proactive material handling approach focuses on making changes when risk factors have been identified, as well as incorporating automated material handling into the design phase of new facilities, equipment, tools, and scheduling changes.

All employees are required to follow the minimum procedures outlined in this Procedure. Any deviations from this Procedure must be immediately brought to the attention of the Procedure Administrator.

Scope

IPS★ITCS strives to provide all employees with a safe and healthy workplace. This Manual Material Handling Procedure is integrated into our company's written safety and health Procedure and is a collaborative effort that includes all employees. The Procedure Administrator is responsible for the Procedure's implementation, management, and recordkeeping requirements.

A Glossary of terms is in **Appendix A**.

Procedure Responsibilities

Management: The management of IPS★ITCS is committed to the safe handling of all materials. Management supports the efforts of the Manual Material Handling Procedure Administrator and the HSEQT Manager by pledging financial and leadership support for the identification and control of material handling risk factors.

Material Handling Procedure Administrator: The Procedure Administrator will report directly to upper management and be responsible for this Procedure. All evaluations, controls and training will be coordinated under the direction of the Procedure Administrator in collaboration with management. The Procedure Administrator will monitor the results of the Procedure and determine additional areas of focus as needed. The Procedure Administrator will also:

- Ensure that those performing worksite evaluations and training are properly trained
- Ensure that control measures are implemented in a timely manner
- Schedule manager, supervisor and employee training and maintain records to include date, name of instructor, topic and materials used
- Follow-up with any material handling strategy and/or solutions
- Monitor the Procedure on a quarterly basis and provide an annual review
- Assist in selection of appropriate material handling equipment and tools

Department Managers and Supervisors: Managers and supervisors of IPS★ITCS will:

- Remain accountable for the health and safety of all employees within their departments through the active support of this Procedure
- Attend material handling training on the recognition and control of work-related material handling risk factors; this is a supplemental component to our Ergonomics Procedure

- Ensure that employees in their areas have received the appropriate training
- Ensure that safe material handling practices and principles are considered daily and when conducting worksite evaluations
- Ensure that recommended controls are implemented and/or used appropriately through active follow-up
- Provide employees with and ensure the proper use of appropriate tools, equipment, parts and materials
- Maintain clear communication with managers and employees
- Make assistance available to employees who manually handle or lift items weighing 50 pounds or greater

Employees: Every employee of IPS★ITCS is responsible for conducting himself/herself in accordance with this policy and Procedure. All employees will:

- Use two-wheeled trucks, four-wheeled carts, roller conveyors, pallet jacks, or any other material handling equipment in the manner established by managers and supervisors
- Ensure that equipment is properly maintained in good condition and when not, report it immediately
- Provide feedback to managers and supervisors regarding the effectiveness of design changes, new tools or equipment
- Attend training as required and apply the knowledge and skills acquired during training to their jobs, tasks, processes, and work activities
- Use proper lifting and material handling techniques as outlined in this policy
- Limit manual lifting or handling tasks to objects less than 50 pounds
- Get assistance whenever manually handling or lifting materials that are 50 pounds or greater
- Report injuries within 24-hours of their occurrence

Employee involvement is an essential element to the success of this Procedure. Employee participation in the Procedure will occur only during company time. Employees that identify lifting hazards or other safety hazards will immediately notify their supervisor. If a supervisor is not available, they are to contact the HSEQT Manager or Procedure Administrator.

Manual Material Handling Risks

Material Handling Equipment. Additional tools and equipment are required when lifting or handling material weighing over 50 pounds. Manual material handling equipment should be used only for its designed task and maintained in good condition. The manual material handling equipment available at IPS★ITCS includes:

- **Two-Wheel Trucks:** Do not overload these trucks; load a maximum of 200 pounds. Make sure hand trucks are stored in a vertical position when not in use.
- **Four-Wheel Carts:** Load material evenly on carts to prevent tipping and view obstruction. Push rather than pull carts, unless specially designed to be pulled.
- **Roller Conveyor:** Keep hands and feet away from pinch points and make sure that rollers extend beyond the load.
- **Pallet Jacks (manual or powered):** Use a jack properly rated for the load. Place the jack on a level, stable, and clean surface. Avoid metal-to-metal contact (jack to surface being lifted) by using wooden shims.

Housekeeping. Material handling and storage areas must be kept free of excess materials that create hazards (i.e. fire, explosions, slips, trips, or infestation by insects or rodents.)

Aisles and Passageways. Where mechanical handling equipment is used, 10-foot safe clearances shall be allowed for aisles, at loading docks, through doorways, and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard.

Permanent aisles and passageways are marked with yellow lines. Clearance signs and warning of clearance limits are posted throughout the facility where headroom is below 10 feet. All equipment is marked indicating the working load it will safely support. Do not overload any piece of equipment.

The following is a list of materials/items that are commonly handled manually at IPS★ITCS and the equipment that must be used to handle the material. The list does not cover every lifting occurrence in the workplace. If the task you are about to perform is not listed, contact your supervisor to determine the safest way to handle the material/item.

Employee Training

Training is intended to enhance the ability of managers, supervisors, and employees to recognize work-related material handling risk factors and to understand and apply appropriate control strategies. Training in the recognition and control of these risk factors will be given as follows:

- To all new employees during orientation
- To all employees assuming a new job assignment requiring manual material handling
- When new jobs, tasks, tools, equipment, machinery, workstations, or processes are introduced
- When high exposure risk factors have been identified

The minimum training requirements for all managers, supervisors and employees will include the following elements:

- An explanation of IPS★ITCS material handling Procedure and their role in the Procedure
- Knowledge of job tasks that require manual material handling
- An understanding of the basics of ergonomics
- The methods used by IPS★ITCS to minimize work-related risk factors

Training should include the following topics:

Mechanical aids for carrying or moving loads are to be used whenever possible to minimize manual material handling. These mechanical aids include hand trucks, carts, dollies, rolling conveyors, wheelbarrows, etc. When designing or modifying storage areas, store heavy items on shelves between knee and shoulder level and avoid storing items on the floor. Also, lighter items should be stored on top shelves. Whenever possible, decrease the object container size, change container shape and/or add handles to aid in handling.

Even when mechanical aids are used to move materials, some lifting cannot be avoided. Before you lift, remember the following:

- Use manual material handling devices (hand dollies, carts, lift tables, forklifts) where defined by the company and wherever possible in all other situations
- Wear supportive shoes
- When possible, push and pull rather than lift and lower
- Reduce the size of the material to keep it light, compact and easy to grasp
- Try to have most workplace deliveries placed at hip height
- Always keep objects in the comfort zone (between hip and shoulder height)
- Keep all loads close to and in front of the body
- Keep the back aligned while lifting
- Keep elbows near 90 degrees
- Avoid slopes
- Avoid uneven floors
- Maintain the center of balance
- Let the legs do the actual lifting
- Decide on the route to take
- Check the route for any problems or obstacles such as slippery or cluttered floors

Unloading objects should be done the same way as loading objects, but in the reverse order as follows:

- Slowly bend your knees to lower the load
- Keep your back straight and the weight close to the center of your body
- Allow enough room for fingers and toes when the load is set down
- Place the load on a bench or table by resting it on the edge and pushing it forward with your arms and body
- Secure the load to ensure that it will not fall, tip over, roll or block someone's way

One-arm loads are used when carrying items such as pails or buckets. Lifting and carrying one-arm loads should be performed as follows:

- Bend at the knees and waist, keeping your back straight
- Reach for the load
- Grasp the handle of the load firmly
- Lift with your legs, not your shoulders and upper back
- Keep your shoulders level while switching hands regularly to reduce overexerting one side of the body

Team lifts are used when objects are too heavy, too large or too awkward for one person to lift. Team lifts should be performed as follows:

- Work with someone of similar build and height, if possible
- Choose one person to direct the lift (e.g., "lift on the count of three")
- Lift with your legs and raise the load to the desired level at the same time
- Always keep the load at the same level while carrying
- Move smoothly and in unison
- Set the load down together

Overhead loads should be eliminated, if possible, but, if necessary, should be conducted as follows:

- When lifting or lowering objects from above the shoulders, lighten the load whenever possible
- Stand on something sturdy such as a step stool or platform to decrease the vertical distance
- When lowering objects from above the shoulders, grasp the object firmly, bring the load as close to your body as possible, slide it down slowly and proceed with your move

All training will be recorded on the employee training record form located in **Appendix A**.

Periodic Procedure Review

The Manual Material Handling Procedure will be reviewed annually. Annual walk-through inspections of equipment, procedures and processes will be documented with the forms in **Appendix B**.

Record Retention

All records will be retained for 3 years.

Appendix B – Annual Evaluation Report

Date of Evaluation:	Evaluated by (list all participants):
Written Procedure Reviewed: Yes No	
Comments on Written Procedure:	
The following specific procedures have been reviewed:	
The following specific procedures were modified:	
The following specific procedures were added:	
Reviews of the occupational injuries and illnesses log (OSHA Form 300 or equivalent) and the associated accident investigation reports were completed as part of this evaluation: Yes No	
The following injuries resulted from failure to use correct material handling procedures:	
If injuries are listed above, indicate corrective measures implemented:	

Revision History

Rev	Rev Date	Rev By	Approved By	Description
1.0	1.3.2022	Shayne Torrans	Shayne Torrans	Initial Procedure Document
1.1	12.20.2022	Shayne Torrans	Shayne Torrans	Format Revision

Approvals:

Procedure Owner

Print Name

Date

Signature

Competency Assessment

No.	Questionnaire	C/NYC
Q1		
A1		
Q2		
A2		
Q3		
A3		
Q4		
A4		
Q5		
A5		

Enclosed Attachments	
Risk Assessment	<input checked="" type="checkbox"/>
Environmental Aspect and Impact	<input checked="" type="checkbox"/>
Training and Competency	<input checked="" type="checkbox"/>
Measure and Evaluation Tools	<input checked="" type="checkbox"/>

Competency Checklist

To be filled out by Trainer and signed by Employee, Assessor and Supervisor before being returned to the HSEQT Manager for recording purposes.

Procedure	Competency	Date	Competent YES / NO	Employee Signature

(Please tick appropriate box)

This employee is competent in performing the job.

This employee has not attained the competency level.

*

* *If the employee has not attained all competency levels, the General Manager must assess the action to be taken, provide an extension of training or alternative action as listed below.*

Alternate action to be taken: _____

Signed By	Employee:	_____	Date:	_____
	Trainer:	_____	Date:	_____
	Assessor:	_____	Date:	_____
	Regional Manager:	_____	Date:	_____

Environmental Aspects and Impacts

Identified Environmental Aspects and Impacts

The following table is a summary of the likely environmental aspects and impacts that may be identified during site inspections. The significance of each impact needs to be assessed using the Risk Assessment Model.

Activity	Aspect	Impact
Purchasing & Administrative Work	Consumption of goods	Conservation of natural resources
	Consumption of energy (eg. Electrical equipment and facilities)	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of waste (eg. Paper)	Consumption of space for waste disposal; Habitat loss
Climate Control	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Habitat loss
	Generation of noise	Disturbance to community; Habitat loss
Cleaning of – offices / vehicles	Storage, use and release of chemicals	Contamination of air, water or soil; Risk to human health
Transport (Fleet vehicles / staff travel)	Consumption of energy	Release of greenhouse gases and atmospheric pollution; Consumption of natural resources; Loss of habitat at all stages of generation; Light pollution
	Consumption of goods (eg. Oil)	Consumption of natural resources; Generation of waste; Habitat loss; Biodiversity impacts
	Generation of waste (eg. Oil)	Consumption of space for waste disposal; Potential contamination of water or soil; Habitat loss
	Exhaust emission	Release of greenhouse gases and atmospheric pollution
	Use of dangerous goods (eg. Batteries)	Potential contamination of air, water or soil; Risk to human health
	Generation of noise	Disturbance to community; Habitat degradation
Operations		

Sample only.
To be filled in

Risk Assessment

Risk Assessment // insert name here					
Step No: Logical sequence	Sequence of Basic Job Steps documented in the Procedure, Work Instruction and project plans. Break down Job into steps. Each step should be logical and accomplish a major task.	Potential Safety & Environmental Hazards/Impacts at the site of the Job Identify the actual and potential health and safety hazards and the environmental impacts associated with each step of the job.	Risk Rating Refer to the risk matrix or HSEQT.PRO. Risk Mgt	Recommended Corrective Action or Procedure <i>Determine the corrective actions necessary to reduce the risk to as low as reasonably practical (ALARP) refer to HSEQ.PRO.Risk Mgt. The risk must be reduced or controlled to ALARP before work commences.</i> Document who is responsible for implementing the controls to manage each hazard identified.	Risk Rating refer to the risk matrix or HSEQT.PRO.Risk Mgt
1.					
2.					
3.					
4.					
5.					

Audit



Process: insert// Procedure: Insert //		Date:		Audited by:	
		Location of Audit:		Area Mgr/Supervisor:	
Item	Question	Evidence Sited	Comments		Conformance Score 0,3,5
1.					
2.					
3.					
4.					
5.					
6.					
7.					
AUDITOR'S SIGNATURE:		CONFORMANCE SCORE: / 25		0 – Non-Conformance	
SAFETY REP'S SIGNATURE:		CONFORMANCE %:		3 – Continuous Improvement Opportunity	
				5 – Total Conformance	